

HIP MUSCLES

MUSCLE	ORIGIN	INSERTION	ACTION
<u>hip extensors</u> - pull vertically behind the joint, upper + lower.			
<u>gluteus maximus</u> (upper)	antrum of ilium back of hip joint	back of upper femur.	extends, abducts rotates thigh outwards.
<u>hamstrings</u> (lower)	ischial tuberosity	back of upper ends of both leg bones.	- pulls back femur - flexes knee
<u>abductors</u> - swing femur laterally.			
<u>gluteus medius</u>	antrum of ilium	greater trochanter	- prevents pelvis tipping - anterior fibres rotate pelvis medially - posterior - laterally
<u>adductors</u> - to pull femur medially			
<u>adductors</u>	pubic arch	linea aspera	pull below joint - in gripping horse.

KNEE MUSCLES.

MUSCLE	ORIGIN	INSERTION	ACTION
<u>Flexors</u>			pull vertically behind knee
<u>Hamstrings</u>		→	pull in front of knee
<u>Quadriceps femoris</u> (upper)	front of hip bone		
(lower)	linea aspera	patella	extends knee (<u>rectus femoris</u>) - part - flexes hip.

CALF MUSCLES

MUSCLE

ORIGIN

superficial muscles

(back of leg)

- back of femur above condyles
- back of leg bones

deep muscles

(back of leg)

back of leg bones
(run behind malleoli).

anterior leg muscles

front of leg bones
(cross front of ankle joint)

short muscles of foot

(most on sole)
(arranged as in hand)

FOOT MUSCLE

INSERTION

tuberosity of calcaneum

sole of foot
(some to toes)

dorsum of foot + toes

ACTION

- flex the knee
- plantar flex the foot, leg pulling on heel.

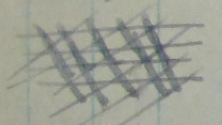
- plantar flex the foot
- some flex toes

medial - invert foot
lateral - evert foot.
(out)

- dorsi - flex ankle.
- extend toes

- gives spring to step
- supports arches of foot.

STOMACH MUSCLES.

MUSCLE.	ORIGIN	INSERTION	ACTION
<u>Rectus abdominis</u>	pubic crest	cartilages of 5 th to 7 th ribs (lower end of sternum)	- protects abdominal muscles - flexes the trunk
(fissure between 2 muscles called linea alba)			
3 broad flat <u>muscles</u> (3 layers) 	blend in front	at side - to lower ribs. at back - to lumbar vertebrae at front - to hip bones.	- compress abdominal contents - protect internal organs.
(have flat sheet-like tendon (aponeurosis))			
<u>sacro-spinalis</u> (erectors)	- from back of sacrum, up back of trunk.	- to backs of ribs + vertebrae.	- extends trunk. - balances trunk in walking)

Joints

Strength + mob.

● Sacro-ileac joints - gliding joint.

Art. 1st 2nd & 3rd l. joints sections.

✓ sides of sacrum & ilium.

- small amt. of movement.

(more in female) increased in frequency & menstruation.

Ligaments

Ant. sacro-ileac ligament (thin)

- covers ant. & inf. surfaces of joint.

Post. sacro-ileac ligament

- long & short bands. prevents from tilting.

Interspinous lig. very strong

- fills in area above joint cavity.

- forms chief bond between bones.

Ilio-lumbar

Sacro-lumbar

0 - from 5th lumbar vertebrae - to just s. of iliac bone

1 - to crest of ilium.

- suspends 5th lumbar vert. between iliac crests & prevents forward displacement.

Sacro-tuberos lig.

0 - broad origin from sides of sacrum & coccyx.

1 - med. border of tuberosity of ischium.

- maintains correct position of pelvis & prevents up & down & backward movement of sacrum & coccyx.

- keeps tail down.

Sacro-spinous lig.

0 - lower part of sacrum & coccyx.

1 - spine of ischium.

Assists sacro-tuberos.

Movements - gliding

- permits pelvis to be tilted. ~~front~~ + down.
- done by psoas-minor + iliacus.

upward tilting

- gluteus max. + sacro - spinalis + quadratus lumborum.

Mt. of body is transmitted from 5th lumbar to sacrum.

- prevents from post. sac-ilio lig. + long ilio-lumbar. (prevent tilting.)

Symphysis pubis

- cartilaginous joint.
- fibro cartilage between 2 bones to prevent bones separating + to take shock.
- during pregnancy yields
- arcuate lig.

Sacro-nutibral angle - less in male.

- inter-nutibral disc thicker here than anywhere else - movement pres.
- back. + fr. movements take place, when sitt. to standing. 1 seg. sacrum 5 lumbar.

Applied Anatomy

Sacro-ilio jt. may occur, usual injury wrenching of lig. pain go along sciatic nerve.

Hip - Joint.

- ball + socket.
 - head of femur - acetabulum.
 - covered with cartilage - femur capites.
 - Capsule - strong + thick - above + front.
 - att. rim of acetabulum above.
 - att. trochanteric line front.
 - fibres straight at front + circular behind.
- Ligaments

Ilio-femoral - prevents from tilting back.

"Y" lig.

- att. above - ant. inf. spine of ilium.

below - trochanteric line.

- prevents hyper-extension of hip - taut in erect position.

Pubo-capsular lig.

Isochial-capsular lig.

Gluteal labrum.

- ^{femur} ~~th~~ of fibro - cart. - deepens socket of acetabulum.

- protects edge + slips head of femur.

Ligamentum teres.

- from femur capites - side of acetabular notch - broad band.

- band of membrane - protected blood vessel to head of femur in youth.

- taut in semi-flexion + adduction.

Movements.

Flexion

Extension

Abduction

Adduction

Circumduction
Rotation.

Applied anatomy.

Dislocation Note. Congenital dislocation common due to intrauterine change.

At dislocation

Knee Joint.

Bones. - 2 condyles + 1 articular.

Capsule - thin + lax - reinforced by lig.

External lig.

- ligamentum patellae.

- quadriceps tendon.

- open patella.

Med. lig. - strong, flat.

- tib. of m. condyle femur - m. cond. of tibia

Lat. lig. -

Oblique post. lig.

- upper margin of inter - condylar fossa + femur above.

- passes to head of tibia laterally.

- strong slips from semi - membranes.

Internal lig.

- Semi - lunar cart.

- 2 crests of fibral cart. deepen surface of tibia. - thick outside + pre + thin inside.

- medial one - more oval + att. firmly to tibia.

137 lateral one - circular + thicker.

● Cruciate lig.

- ant. + post.

Ant. - from inter-condyloid notch to lat. condyle of femur.

- taut in extension - prevents over-extension & rotation.

Post.

- behind inter-condyloid eminence to med. condyle of femur.

- taut & allows rotation.

Applied anatomy.

Spipped cart. usually med.

- knee locks in semi-flexion

● - acute signoritis - orophitis - fluid in knee joint tells of signoritis.

Tibia - Fibular Joint.

Superior - D-F. Art.

- gliding joint - upper end of fibula + part on back of tibia

- capsule ant & post. lig.

- connection between knee-jt. (sometimes)

Inter-ossous membrane.

- fibres run down & laterally connecting tibia & fibula.

● - separates tibia & fibula ant. & post. leg muscles. + muscle attachment.

Inferior D-F. joint.

- immovable (syndesmosis)

- united by inter-ossous lig.

gliding - little movement.

Continuation of interosseous lig.

- held together by inf. transverse lig. Ant. Inf. 2F. Transverse.
- Post. " " Interosseous.

Ankle-joint - hinge - tibi & plantar flexion.

- between lower end of tibia, medial & lateral malleolus. (Protrusion of talus.)
- caps. att. to borders of malleoli & transverse lig above & borders of art. surface of talus below.

Deltoid lig.

- att. - tip of ^{medial} lateral malleolus.
- reaches - front of talus
- stronger - sustentaculum tali of ^{calc.} talus
- 2nd - talus & navicular.
- limits eversion.

Lateral side (hinge ft.)

Ant. talo-fibular (lig.)

Post. "

Calcaneal " "

Ant. malleolus to talus

Ant. malleolus to post.

Movements. lat. malleolus to calcaneus

talus.

Flexion - tibi

Ext. ant. peroneus longus

Plantar - gastrocnemius.

ext. hall. &

soleus

tib. post.

Flexor hallucis l.

" digitorum l.

peroneus l.

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Applied Anatomy.

Dislocation rare - ankle sprains frequent.

139 in our mission - swelling.



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